

XII. Removal Actions and the ARARs Process

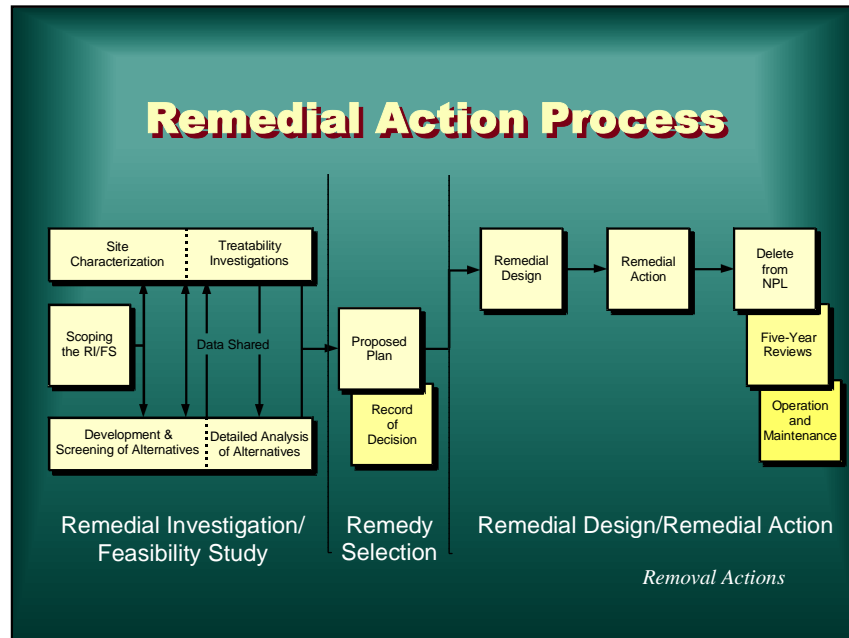
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Overview

- Removal actions
- Attaining ARARs
- Emergency
- Time critical
- Non-time critical
- State ARARs

Removal Actions

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Removal Actions

- A short-term process designed to mitigate or stabilize immediate threats
- Used to respond to releases or substantial threatened releases
- Must comply with ARARs to the extent “practicable”

Removal Actions

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At any time in the remediation process, removal actions may be taken whenever there is a release or threat of a release of a pollutant, hazardous substance, or contaminant that may present an imminent and substantial danger to public health, or welfare, or the environment. Conditions that might call for a removal action include the following:

- Actual or potential exposure of nearby human or animal populations or sensitive ecosystems;
- Potential for contamination of drinking water supplies or the food chain;
- Potential for further environmental degradation;
- The potential for a release or migration of a release; or
- The risk of fire, explosion or failure of containment systems.

The NCP requires that fund-financed removal actions that are conducted on-site comply with requirements that are applicable or relevant and appropriate to the extent practicable considering site circumstances such as the urgency of the situation and the scope of the removal action. Gathering detailed information regarding site characteristics, preparing written ARARs requests to the State, or waiting for State agencies to submit a list of ARARs should not delay action.

Dependent on site-specific agreements, DOE functions as the lead agency to initiate removal actions under section 104(a) of CERCLA. *Because DOE removal actions are not fund-financed, DOE removal actions are not subject to ARARs compliance under NCP regulations.* However, DOE complies with 40 CFR Section 300.415 (i).

Attaining ARARs During Removal Actions

- Must comply with ARARs to the extent “practicable”
- Considerations in determining whether an ARAR is “practicable” include
 - Urgency of the situation
 - Scope of the removal action to be conducted

Removal Actions

Notes:

Since 1985, it has been EPA’s **policy** to attain ARARs during on-site removal actions to the extent possible considering site-specific circumstances. In general, compliance with most Federal and State ARARs will be practicable during removal actions. Under 40 CFR 300.415(i), fund-financed removal actions (regardless of whether the site is listed on the NPL) must attain ARARs to the extent practicable.

In determining whether compliance with ARARs is practicable, the lead agency should consider the urgency of the situation (i.e., the need for prompt response) and the scope of the removal action. Urgency of the situation will be dictated by the need for prompt response action to ensure protection of human health and the environment. In cases where the degree of threat warrants immediate response and full identification or compliance with ARARs could cause the lead agency to delay response that would compromise the protection of human health and the environment, compliance with ARARs would not be practicable. The second factor -- scope of the removal action -- relates to the special nature of removal actions in that they are used to minimize and mitigate potential harm rather than totally eliminate it. In some cases, compliance with ARARs is outside the scope of the removal action because the ARAR requires a degree of cleanup that would be inappropriate or inconsistent with the limited scope and purpose of the removal action (i.e., stabilizing/mitigating near-term threats).

Even in situations where attainment of ARARs is practicable, DOE as the lead agency may consider whether one of the statutory waivers from compliance with ARARs [codified under 40 CFR §300.430(f)(1)(ii)(C)] is appropriate for a response action. (See 55 FR 8694–8696 for related discussions.)

Types of Removal Actions

- Removal actions can be divided into three categories:
 - ⇒ Emergency (immediate)
 - ⇒ Time-critical (less than 6 months)
 - ⇒ Non-time-critical (greater than 6 months)

Removal Actions

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The type of removal action employed (e.g., emergency, time-critical, non-time-critical) will impact the level of ARAR analysis, as well as other elements of a CERCLA response activity (e.g., the level of documentation; timing of administrative record; extent of public participation required under the NCP). When evaluating the appropriateness of using removal authorities, DOE as the lead agency should determine the appropriate CERCLA response action based on the type of situation, the urgency and threat of the release or potential release, and the subsequent time frame in which the action must be initiated, the cost and its duration.

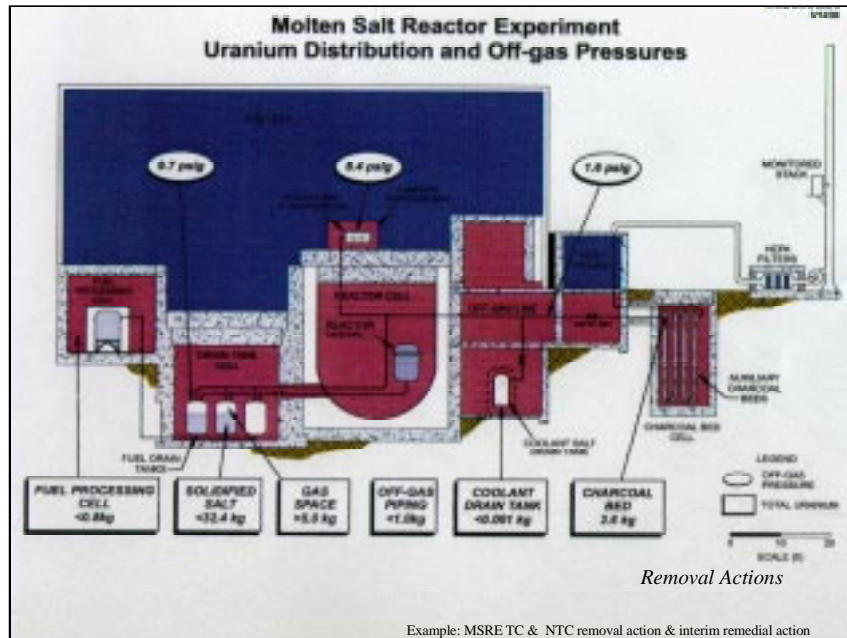
In general, **emergency** removal actions are necessary when there is a release that requires on-site activities to begin within hours or days. These are often addressed as a part of ongoing operations using facility response plans.

Time-critical removal actions are taken in response to releases requiring on-site action to be initiated within six months.

Non-time-critical removal (NTCR) actions are taken when a removal action is warranted, but a planning period of at least six months is available before on-site activities must begin.

Examples of removal actions:

- (1) ORNL Molten Salt Reactor Experiment (MSRE) - one TCR, one NTCR action, and one interim remedial action.
- (2) ORNL WAG 5 Seeps C and D NTCR actions
- (3) ORNL WAG 1 SIOU CWA NOV - considered addressing it as a TCR action.



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Example: ORNL WAG 5 Seep C NTCR action

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Example: ORNL WAG 5 Seep C NTCR action

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Example: ORNL WAG 5 Seep D NTCR action

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Example: ORNL WAG 5 Seep D NTCR action

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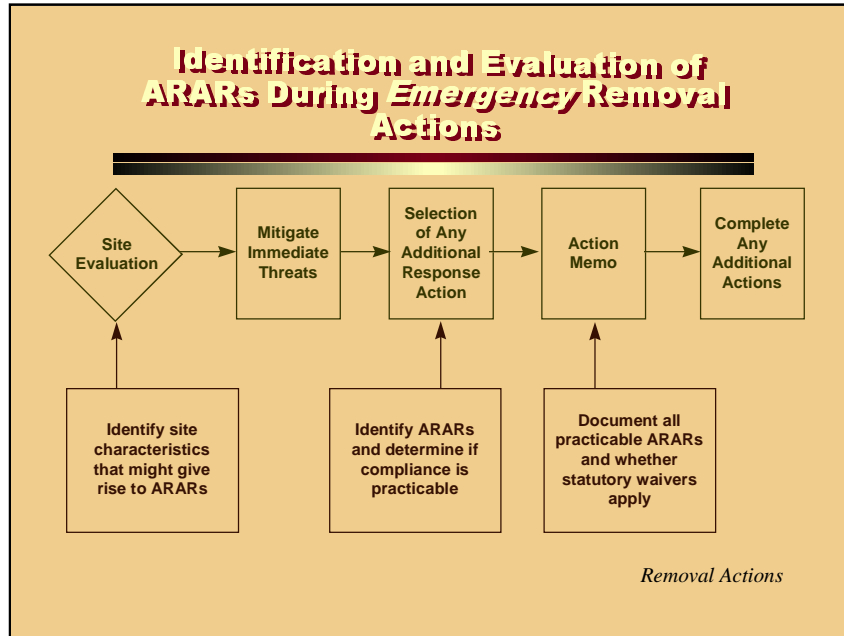


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Example: ORNL WAG 5 Seep D NTCR action

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Emergency removal actions are typically initiated within hours or days and often follow facility response plans that have undergone review by and received approval from the regulators. For emergency removal actions, DOE should not delay a response in order to identify potential ARARs. Once immediate threats to human health and the environment have been averted or mitigated, however, DOE should identify and consider ARARs for actions left to be performed using the process detailed in the flow chart.

For example, if corroding or leaking drums are found mingled in a common area and contain incompatible substances, it would be appropriate to store the substance temporarily in a secured environment before considering ARARs. In such an emergency, DOE is not expected to determine whether the hazardous substance qualifies as hazardous waste under the Resource Conservation and Recovery Act (RCRA) and to identify which requirements apply to the management of the waste until all immediate threats associated with the incident have been mitigated. However, once the corroding/leaking drums are overpacked and separated, ARARs determinations should be made before arranging for permanent disposal.

Action Memorandum

Documenting ARARs

- Assure the public, state, and local agencies that ARARs were identified and met
- Make the public aware, in the administrative record, of all ARAR determinations
- Provide justification for actions taken at site

Removal Actions

Notes:

Contents of Action Memorandum

- Purpose
- Site conditions and background
- Threats to public health or welfare and/or the environment\
- Proposed Actions and Estimated Costs
- Expected change - should action be delayed or not taken
- Outstanding policy issues
- Enforcement
- Recommendations

Removal Actions

Notes:

Contents of Action Memorandum (Continued)

- List of federal ARARs
- An explanation, if necessary, of why federal ARARs were not considered before removal activities
- List of state ARARs
- An explanation, if necessary, of why state ARARs were not considered

Removal Actions

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Example of ARARs Documentation for Action Memorandum

Proposed actions and Estimated Costs

Compliance with Applicable or Relevant and Appropriate Requirements - Example Discussion

Potential federal ARARs for the removal action at the Pleasant Harbor Oil Recycling Company site in any state, U.S. were identified with the help of Region II representatives of the Office of Solid Waste, the Office of Water, the Office of Air Quality Planning and Standards, and the Office of Toxic Substances. The OSC communicated with these offices on February 12, 15, 16, and 17, 199x, respectively. Based on these communications, the following were identified as practicable federal ARARs for the site:

- RCRA Subtitle C (40 CFR 264 Subpart J) requirements for storage of a RCRA hazardous waste (KO52-Petroleum refining industry tank bottoms) in a tank with secondary containment
- TSCA requirements for storage of PCBs
- TSCA requirements to incinerate PCB-contaminated waste at a TSCA-permitted incinerator
- Clean Water ACT Section 404 requirements for dredging a federally designated wetland

The following administrative and substantive requirements were determined to be applicable to off-site actions:

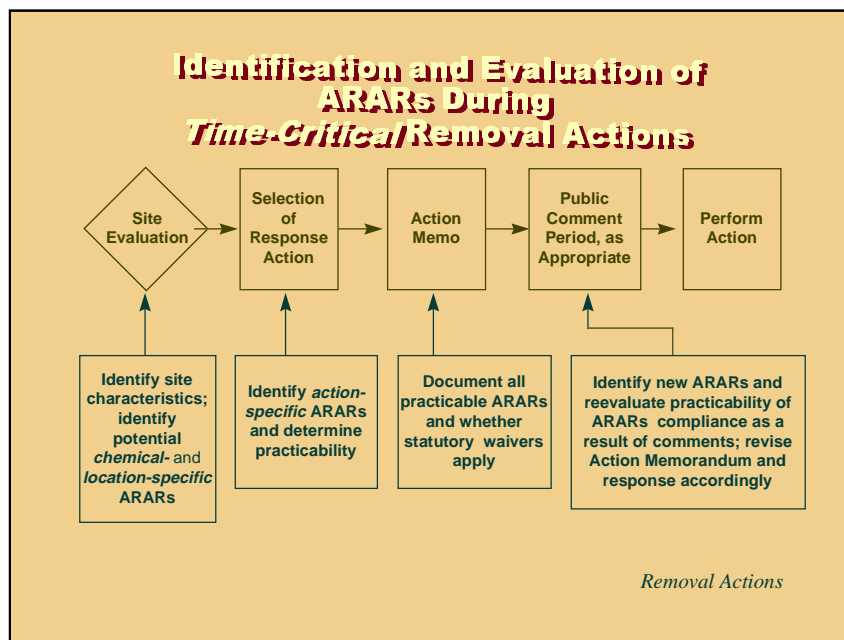
- RCRA and DOT requirements for transportation of a hazardous waste (manifest requirements, storage, and labeling of waste).

The following was identified as a requirement to be considered (TBC) for the site:

- TSCA PCB Spill Policy requirements for cleanup of PCB-contaminated soil in a residential area

Removal Actions

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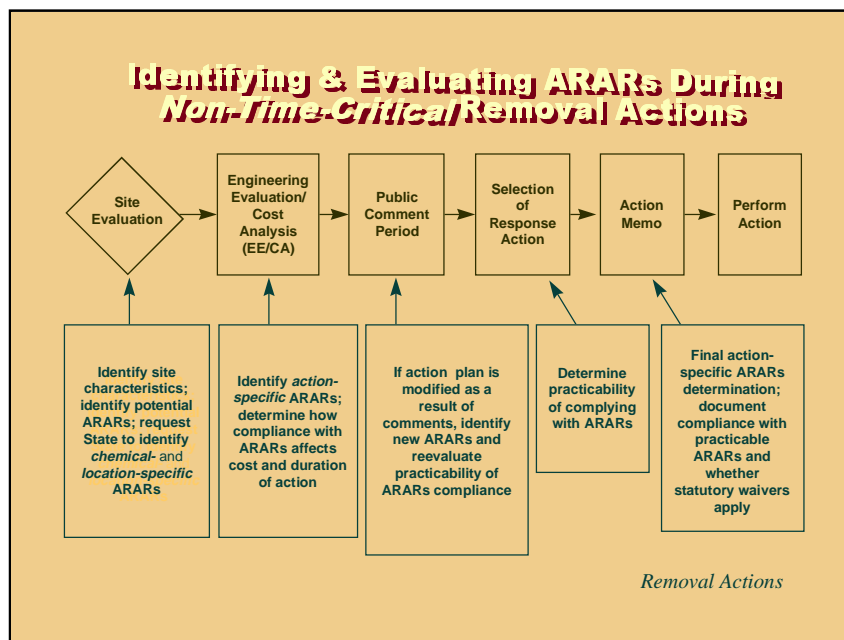


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For time-critical removal actions, the urgency of the situation will determine how quickly and thoroughly the lead agency identifies and analyzes potential ARARs. DOE may be required to identify ARARs at several different stages of the removal process due to the need for quick response, and may alter the selected response action to comply with new ARARs as the removal action progresses.

The flow diagram above presents the ARARs process typically followed in time-critical removal actions. In general, the lead agency should identify potential ARARs during the site evaluation phase and assess them in developing possible responses before initiating any response actions. DOE should document the practicable ARARs in the Action Memorandum. DOE must publish a notice announcing the availability of the administrative record within 60 days of initiating the action and ensure at least 30 days are provided for public comment [40 CFR 300.415(m)(2)]. If DOE modifies the preferred cleanup activity based on public comments or other circumstances, they also should identify and, to the extent practicable, comply with new ARARs for the modified action (especially action-specific ARARs).

Although this diagram indicates the time-critical removal process is sequential, in the most urgent time-critical removal actions, DOE could identify ARARs concurrently with the initiation of site cleanup. DOE should comply with those ARARs to the extent practicable; identify additional ARARs; and prepare the Action Memorandum after preventing, stabilizing, or mitigating near-term threats.



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As the flow chart illustrates, non-time-critical removal actions are subject to additional requirements. Specifically, DOE will conduct an Engineering Evaluation/Cost Analysis (EE/CA) for NTCR actions, which typically allows DOE to more fully consider ARARs in development of response actions. During non-time-critical removal actions, sufficient time should be available for DOE to ensure that ARARs determinations are based upon a reasonable understanding of the site characteristics. Since evaluation of the site will identify the location of a release and the chemicals of concern relatively quickly, chemical- and location-specific ARARs should be identified as promptly as possible. Action-specific ARARs should be identified later in the process after qualified cleanup technologies are evaluated and selected for further analysis in the EE/CA.

As with time-critical removal actions, for NTCR actions, DOE should identify potential ARARs during the site evaluation phase, assess them in developing possible responses before initiating any response actions, and document the practicable ARARs in the Action Memorandum. Unlike time-critical removal actions, however, certain attachments are required for approval of NTCR Action Memorandums. These include:

- EE/CA Approval Memorandum and the EE/CA,
- Sampling and analysis plan and formal community relations plan, if appropriate, and
- Written responses to significant comments.

DOE must announce the availability of the administrative record when the EE/CA becomes available for public comment (i.e., when it is signed). For non-time critical removal actions, a 30-day public comment period is required on the EE/CA and any supporting documentation at the time the EE/CA is made available public inspection.

Contents of an EE/CA

- Executive Summary
- Site characterization
- Identification of removal action objectives
- Identification and analysis of removal action alternatives
- Comparative analysis of alternatives
- Recommended removal action alternative

Removal Actions

Notes:

DOE also prepares an ***Engineering Evaluation/Cost Analysis*** (EE/CA) for all NTCR actions. The EE/CA summarizes which requirements are applicable or relevant and appropriate to an alternative, describes how the alternative meets those requirements, and analyzes how each alternative achieves three overarching objectives -- cost, effectiveness, and implementability. Selection of the appropriate removal response is documented in the ***Action Memorandum***. This memorandum serves as the primary decision document and substantiates the need for a removal response, summarizes the EE/CA, lists the Federal/State ARARs deemed practicable, if any, and explains the reasons Federal/State ARARs were not considered prior to removal initiation.

EE/CA ARARs Documentation Example

Removal Actions

Notes:

State ARARs

- In order for state requirements to be ARARs, they must be:
 - ⇒ Promulgated
 - ⇒ More stringent than federal requirements
 - ⇒ Identified in a timely manner

Removal Actions

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Procedures for Identifying State ARARs

Removal Action Contemplated or Emergency Response Initiated

Notify state representative of potential removal action and request initial identification of state



Written Request is Sent to State

Send state a letter requesting a written list of potential ARARs; indicate when response is needed (this step may occur after mitigation of immediate threats in an emergency situation).



Site Conditions and Potential Actions Become Known

Provide state with information on site location, site contaminants, contaminated media, threat, and potential removal actions as this information becomes known..



Potential State ARARs List is Received

Determine which listed state requirements are actually ARARs for the site; determine whether compliance is practicable

Notes:

Summary

- DOE will comply with ARARs to extent “practicable”
- ARARs are documented in an Action Memorandum
- An Action Memorandum is prepared for all types of removal actions
- An EE/CA is prepared for non-time critical removal actions

Removal Actions

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